

AAAAI Ask the Expert 5/18/12

Response from Dr. Scott Sicherer:

I deferred the query to our dietitian, who gave the following overview. Her knowledge base on this apparently derives from casual discussions with Steve Taylor, who perhaps is a better person to address the question, but to save some time/effort I paraphrase Marion's response below and have CC'd Steve. We are not aware of specific studies to "back this up".

From a clinical perspective, we use formulas that contain corn syrup and corn syrup solids without difficulty for patients who are allergic to corn. We therefore do not restrict a formula with these ingredients for a patient with corn allergy. However, we are not aware of specific allergenicity studies on these ingredients.

Corn starch is an ingredient that may have a very trace amount of corn protein (which probably has no clinical relevance for most people with a corn allergy). Baking powder contains corn starch, but the amount of baking powder ever used in a product is so small that the amount of corn starch would be even smaller, and, therefore, the amount of corn protein would be extremely miniscule- almost surely undetectable in a serving of such a product.

Corn starch (already with only very trace protein) is the starting material for corn syrup. The final products of corn syrup, glucose syrup, dextrose (granular) or high fructose corn syrup should have undetectable corn protein.

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We received additional information from Dr. Steven Taylor regarding your inquiry.

Thank you again.

Sincerely,
Phil Lieberman, M.D.

Response from Steven Taylor, PhD.:

Marion's answer is quite accurate. Corn syrup (also known as glucose syrup), corn syrup solids, glucose, dextrose, maltodextrin, corn oil, and high fructose corn syrup (note I have added a few ingredients) have no detectable corn protein residues and should be quite safe for someone with IgE-mediated allergy to corn. Corn starch can contain up to 40 ppm (ug/g) of corn protein but that is a small amount in most applications of corn starch and is probably tolerated by most individuals with corn allergy.

This information is well documented when suppliers of these ingredients do compositional analysis of these products. However, it is not well documented in published literature.

Of course, I might add that a fair number of individuals believe that they have corn allergy based upon a number of self-help "medical" books sold at health and natural foods stores. This theory was more popular 20 years ago than it is today but the food industry still encounters individuals who firmly believe that they are allergic to ingredients like high-fructose corn syrup. So, whenever I get a question such as the original one posed, I always wonder if I am dealing with someone who has a legitimate diagnosis or one of the self-diagnosed cases. Of course, there is no way to know. But that is why I always try to refer to IgE-mediated corn allergy because we can be pretty definitive that there are no documented cases of IgE-mediated corn allergy attributable to corn syrup et al.

Steve Taylor
FARRP